

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Norbert Wolters et al
Examiner: Arpad F. Kovacs
Serial No.: 09/727,134 Group Art Unit 3671
Filed: 30 November 2000 (Atty. Ref. No. 08874-US)
For: ROW INSENSITIVE GATHERING DEVICE FOR AN AGRICULTURAL
HEADER

Moline, IL 61265

30 November 2006

APPLICANT'S APPEAL BRIEF

Commissioner for Patents
PO Box 1450
Washington, D.C. 20231-1450

Sir:

Real Party in Interest

The real party in interest is Mashchinenfabrik Kemper GmbH & Co. KG (hereinafter Kemper) having its principal place of business in Breul, 48703 Stadtlohn, Germany. Kemper became the real party in interest by an assignment dated 15 November 2000 and recorded with the Patent Office on 30 November 2000, Reel 011358 Frame 0264.

Related Appeals and Interferences

The Board's attention is directed to an Appeal in US Patent Application 09/751,512, filed 22 November 2000 having similar issues on constructing the prior art and claim language. The Board rendered a decision in November, 2005, in which the Examiner was reversed *in toto*.

The Board is also directed to a previous appeal in the present case (Appeal 2005-0352) appealing the Examiner's final rejection of claims 1-7, 20 and 21. The Examiner's rejection of claims 1-4, 20 and 21 under 35 USC 102 was reversed. The Examiner's rejection of claims 5-7 was not argued by Applicant and was therefore sustained by the Board.

Status of Claims

Claims 1-13, 15 and 17-24 are currently pending in the above-identified application. Claims 1-7 and 20-24 stand finally rejected by the Examiner. Claims 8-13, 15 and 17-19 stand allowed by the Examiner. A correct copy of the claims is found in the attached appendix.

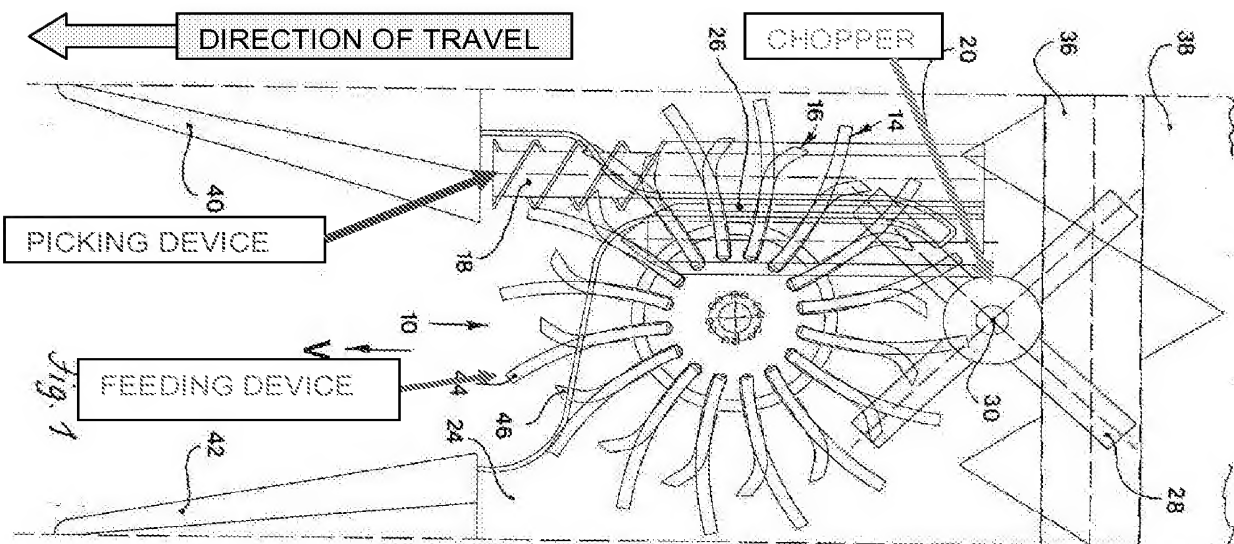
Status of Amendments

There are no outstanding amendments.

Summary of the Invention

A feeding and picking device 10 for a standing agricultural crop is provided with a rotating feeding device 14 and 16. The feeding and picking device 14 and 16 is rotated about a vertical feeding axis. It engages the standing crop and directs it to a picking device. The picking device comprises a snapping channel 26 formed by snapping bars 24 under which is located snapping rolls 18 and 20. For standing corn the snapping rolls 18 and 20 pull the corn stalk downwardly. The snapping channel 26 is too small for the ears of corn to pass therethrough so the ears are snapped off the stalks. The feeding device 14 and 16 comprises a disc having fingers 46 that overlap the snapping channel 26. The feeding device 14 and 16 is designed to transport the plant throughout the effective length of the picking device.

An Embodiment of the Invention:



Issues

The issues are:

1. Does Wiegert [WO 99/03323] teach “the fact that the feeding element can be substituted by any other known devices” as argued by the Examiner?

2. In the alternative, do the Wiegert, Thompson [US 2,777,267] and Pottinger [GB 2012154] references, alone or together disclose all the elements of rejected independent claims 1, 2, and 20?

Grouping of Claims

Rejected claims 1-7 stand and fall together.

Rejected claims 2 and 23 stand and fall together.

Rejected claims 20, 21 and 24 stand and fall together.

Argument

Previous Appeal

To properly frame this appeal, a brief review of the previous Appeal (Ex parte Wolters et al., Decision 2005-0352, 02-11-2005) is appropriate.

The Board reversed the Examiner’s rejection of claims 1-4 and 20-21 under 35 USC 102 based on the same Wiegert reference [WO 99/03323], saying:

[C]hopping unit 21 of Wiegert does not **grasp** plant stalks and direct the plant stalks **to a picking device**. Likewise the feed chains 18, 19 of Wiegert do not **grasp** plant stalks and direct the plant stalks to a picking device. (Emphasis in the original.)

See Wolters, page 4.

The Board sustained the Examiner's rejection of claims 5-7 under 35 USC 103 based on Wiegert in view of the same Thompson [US 2,777,267] and Pottinger [GB 2012154A] references, saying:

The appellants have ***not specifically contested*** this rejection in the brief apart from these claims dependency from claim 1. ...
Accordingly, we ***summarily sustain*** the rejection of claims 5-7 under 35 U.S.C. § 103. (Emphasis added)

See Wolters, page 5.

In subsequent prosecution (and perhaps sensing partial approval by the Board) the Examiner expanded his Section 103 rejection of claims 5-7 to an identical Section 103 final rejection of *all* the rejected claims: claims 1-7 and 20,21 as well as new claims 22-24).

It is from this Final Office Action (06/20/2006) based upon the identical references considered in the original BPAI decision that we presently appeal.

Rejection

The Examiner finally rejected pending claims 1-7, and 20-24, under 35 USC 103, as being anticipated by Wiegert in view of Thompson and Pottinger.

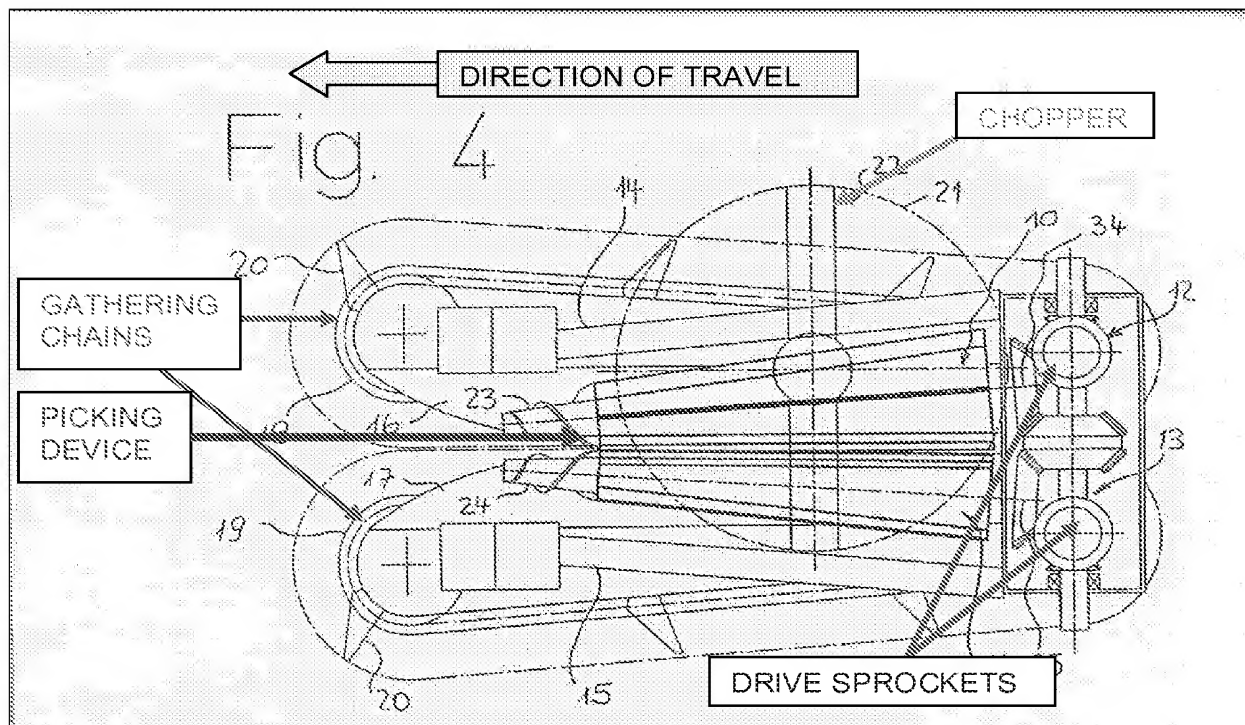
Regarding independent claims 1, 2 and 20, The examiner's position is that Wiegert discloses a feeding and picking device for a standing crop wherein the feeding device comprises a rotating feeding element (fig. 4, item 20) that allegedly (1) rotates about a vertical axis in a circle and comprises (2) a body with outwardly-extending fingers) (Final Office Action, page 3).

The examiner stated that Wiegert did not "show or list the claimed alternative feeding device which grasps plant stalks as claimed", but that Wiegert discloses "the fact that the ***feeding element can be substituted by any other known device***" (emphasis added) citing the US equivalent of Wiegert -- US 6412259 -- at col. 2, lines 32-33.

The Examiner stated (Final Office Action, page 4) that Thompson discloses such “known devices” for conveying stalks in Figs. 1-2, (i.e. items 31, 37) as does Pottinger in Figs. 2 and 4 (i.e. bent tines 10). See also Pottinger, page 3, lines 114-115 and Fig. 1.

The Examiner stated (Final Office Action page 5) that it would be obvious to “provide the feeding device of Wiegert [i.e. item 20] with the alternative feeding device taught by Pottinger and/or Thompson, in order to improve the lifting actions and support on stalks which may have been leaned forwardly by the agricultural harvester.” The Examiner provided no citation for this alleged teaching.

**Wiegert, Fig. 4:
(top view)**



All of the currently pending and rejected independent claims 1, 2 and 20 call for a rotating feeding element that grasps plant stalks and directs the plant stalks to the picking device.

Independent Claims 1, 2 and 20:

There are three independent claims that stand rejected, claims 1, 2, and 20.

Claims 1, 2, and 20 recite:

... a **rotating feeding element** that is **rotated in a circle about a vertical axis** and comprises a **body with outwardly extending fingers**, the rotating feeding element **grasps plant stalks** and directs the plant stalks to the **picking device which separates useable parts from plant stalks**

Claims 1, and 20 recite:

... **the feeding element is designed to transport the plant throughout the effective length of the picking device**

Claim 2 similarly recites:

... **the feeding element is designed to support the plant stalk while it is being processed by the picking device**

Claims 1, 2, and 20 recite:

the **picking device is provided with an inlet ... located in front of the vertical axis of the feeding element**

First Issue:

There is no teaching to combine the Thompson and Pottinger references with the Wiegert reference.

First, the Examiner said “the [Wiegert] feeding element can be **substituted** by any other known device”. He says this is found on page 4, second paragraph of Wiegert. However, the translated language in Wiegert’s US equivalent at col. 2, lines 34, 38 says “[t]he **chopper** shown has rotating blades 22; however it may also have any different combination).” The language is the same in the German Wiegert

WO 99/03323 reference.

Wiegert's "chopper" with "blades 22" is not the Examiner's "feeding element" however. Instead of the chopper with blades 21, the Examiner identifies Wiegert's "Mitnehmern" ("catches") 20 on gathering chains 18, 19 as the "feeding element".

Second, the Examiner summarily states that "[i]t would have been obvious ... to provide the feeding device of Wiegert with the alternative taught by either Pottinger or Thompson, in order to improve the lifting actions and support on stalks which may have been leaned forwardly by the agricultural harvester.

The Examiner identifies no support for this statement. None of the references speak of the risk of an agricultural harvester pushing down crop. It is impermissible hindsight and is based upon the Applicant's own teachings.

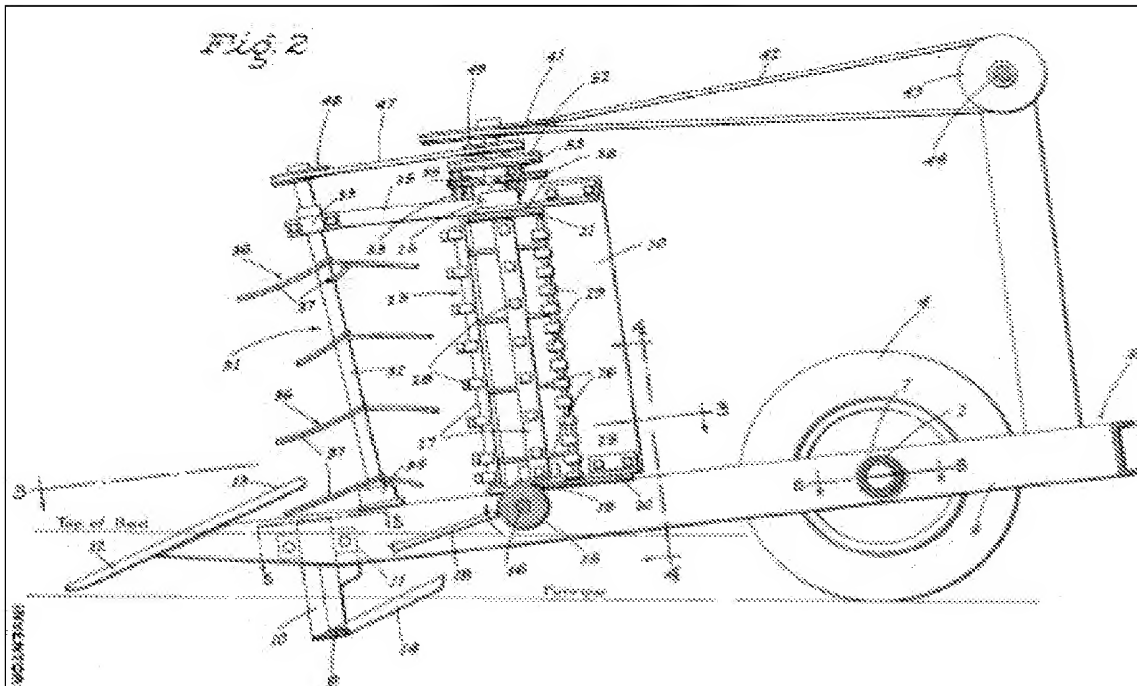
Second Issue:

Regarding independent claims 1, 2 and 20, neither Wiegert's catches (ref. 20) nor the gathering chains 18, 19 on which they are mounted constitute a rotating feeding element that is **"rotated in a circle about a vertical axis"** and comprises **"a body with outwardly extending fingers"** as alleged by the Examiner. Instead, the links in the chain and the catches extending therefrom follow a straight line path over their entire working distance with the tips of each catch extending a very slight distance into the gap between the stripper plates on either side of the stripper plates to support the scorn stalk equally from either side. This is a standard gathering chain arrangement known and used on almost all row units. The catches 20 and the links of the gathering chains briefly follow a curved path (but do not travel in a circle) at each end of their straight line path in order to recirculate back to the front of the row unit.

Further regarding claims 1, 2 and 20, the Thompson reference does not teach a feeding element that **"transport[s] the plant throughout the effective length of the picking device"** (claims 1, 20), or alternatively **"support[s] the plant stalk while it is being processed by the picking device"**.

Thompson cannot teach this since Thompson does not teach a **"picking device"**, **"which separates useable parts from plant stalks"** (claims 1, 2, 20).

Thompson, Fig. 2::
(side view)

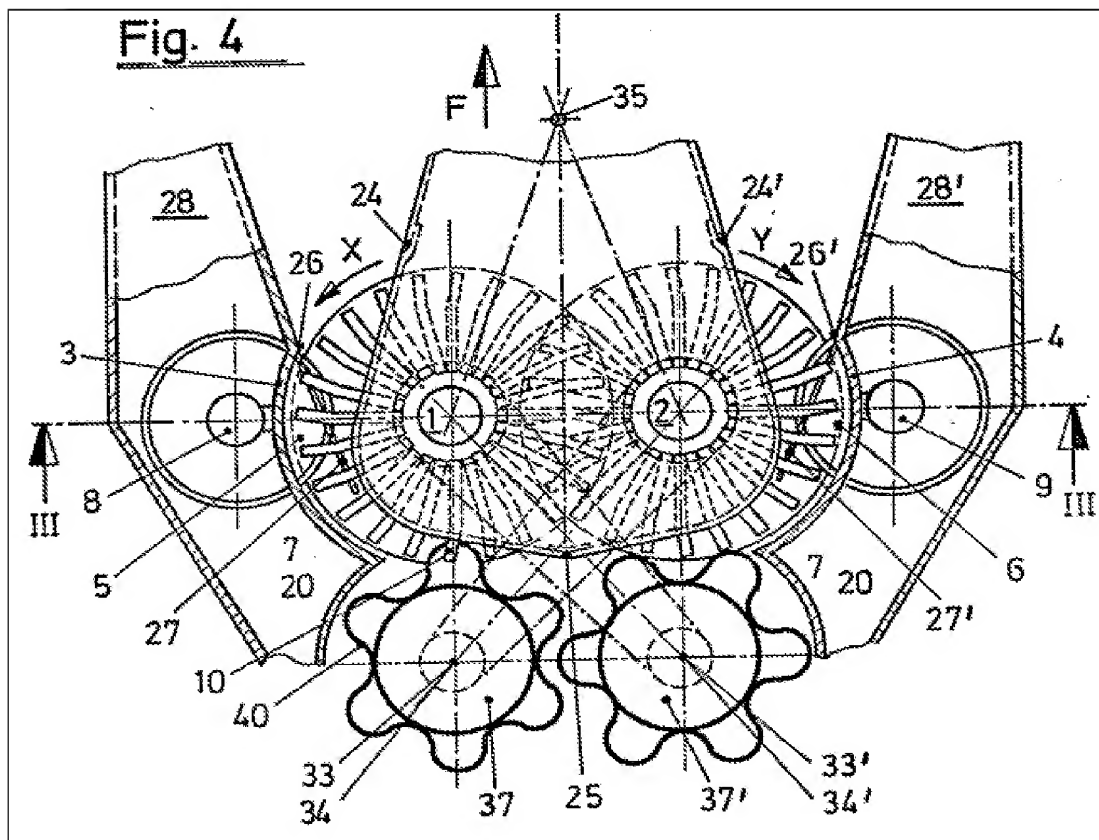
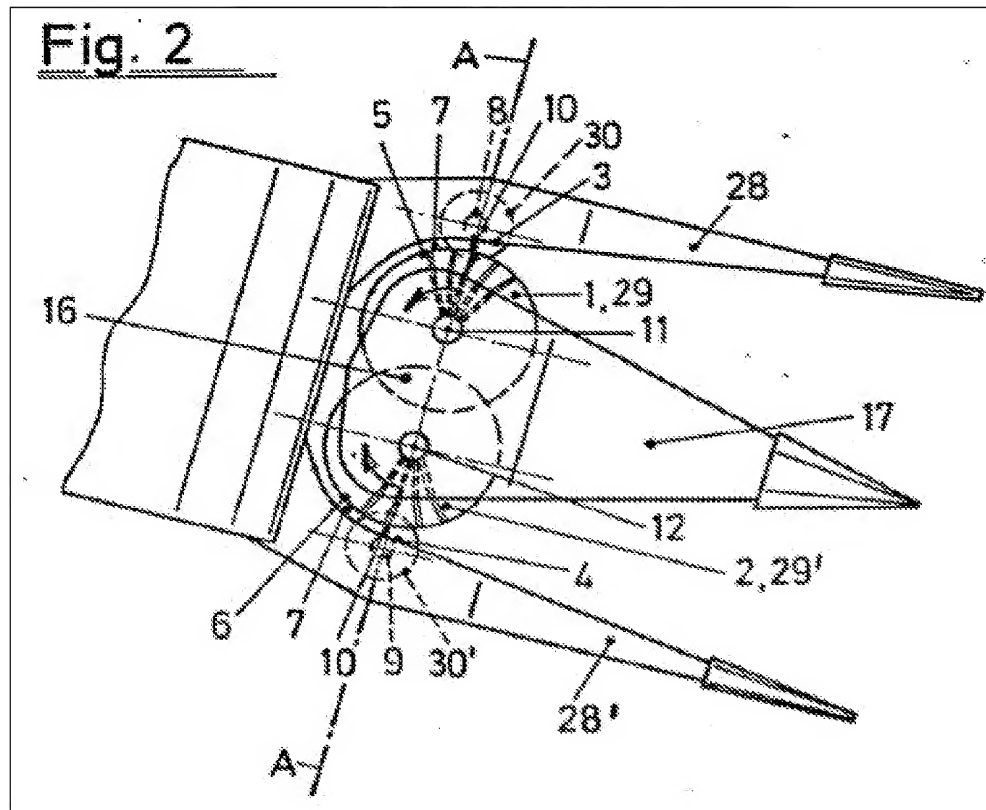


Thompson (see the figure above) has two generally vertical shafts 32 from which fingers 37 extend, that are disposed completely in front of two generally vertical shredder cylinders 23. The shredder cylinders shred things, they don't separate things. Nor do the shafts 32 and fingers 37 support the plant stalk **"through the effective length"** (claims 1, 20) of the shredder cylinders 23 or **"while [the stalks are] being processed by"** the shredder cylinders 23.

Further regarding claims 1, 2 and 20, the Pottinger reference does not teach a feeding element that **"transport[s] the plant throughout the effective length of the picking device"** (claims 1, 20), or alternatively **"support[s] the plant stalk while it is being processed by the picking device"**.

Pottinger cannot teach this since Pottinger does not teach a **"picking device"**, **"which separates useable parts from plant stalks"** (claims 1, 2, 20).

Pottinger, Figs. 2 and 4 (top views):



Pottinger teaches an apparatus for picking up, cutting off and conveying stalked plants to the infeed of a harvesting machine such as a maize chopper (not shown). See the Pottinger Abstract.

Pottinger has two pickup wheels 1,2 with tines 10 that support the plant as it moves across cutters 30, 30'. Any **“picking devices” “which separate useable parts from plant stalks”** (claims 1, 2, 20) are not disclosed in Pottinger. If they exist, however, they would be located well to the rear of the pickup wheels 1,2 and tines 10 or behind pickup drums 37,37' (Fig. 4), conveyor belt 38 (Fig. 10) or conveyor screw 39 (Fig. 1) which alternatively receive the plant stalks from the pick-up wheels 1,2. Thus the elements the Examiner has noted in Pottinger cannot **“transport the plant throughout the effective length of the picking device”** (claims 1, 20), or alternatively **“support[s] the plant stalk while it is being processed by the picking device”**.

Finally, neither Wiegert, Thompson or Pottinger disclose a **“picking device ... with an inlet ... located in front of the vertical axis of the feeding element”**.

In Wiegert, the forward ends of the two feed rolls (the picking device) are behind the vertical axis of the alleged feeding element: items 20 and gathering chain 19. In Thompson, the inlet of the two generally vertical shredder cylinders 23 is behind the axes of the two shafts 32 from which fingers 37 extend. Regarding Pottinger, no **“picking devices” “which separate useable parts from plant stalks”** (claims 1, 2, 20) are disclosed at all, and thus their (non-existent) orientation with respect to the axes of the two pickup wheels 1,2 with tines 10 is not disclosed.

Conclusion:

At least for the above reasons, the rejection of independent claims 1, 2 and 20 under and 2-7, 21 and 23-24 as dependent thereon, is respectfully requested to be withdrawn.

Respectfully,

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Appendix

Claim 1. A feeding and picking device for feeding and picking a standing agricultural crop wherein individual plants in the crop are provided with plant stalks, the feeding and picking device comprising a picking device and a rotating feeding element that is rotated in a circle about a vertical axis and comprises a body with outwardly extending fingers, the rotating feeding element grasps plant stalks and directs the plant stalks to the picking device which separates useable parts from plant stalks, the picking device having an effective length, wherein rotating feeding element is designed to transport the plant throughout the effective length of the picking device and further wherein the picking device is provided with an inlet, the inlet being located in front of the vertical axis of the feeding element.

Claim 2. A feeding and picking device for feeding and picking a standing agricultural crop wherein individual plants in the crop are provided with plant stalks, the feeding and picking device comprising a picking device and a rotating feeding element that is rotated in a circle about a vertical axis and comprises a body with outwardly extending fingers, the rotating feeding element grasps plant stalks and directs the plant stalks to the picking device which separates useable parts from plant stalks, wherein the feeding element is designed to support the plant stalk while it is being processed by the picking device, and further wherein the picking device is provided with an inlet, the inlet being located in front of the vertical axis of the feeding element.

Claim 3. A feeding and picking device as defined by claim 1 wherein the picking device is provided with a snapping channel, the feeding element covers the snapping channel.

Claim 4. A feeding and picking device as defined by claim 3 wherein gaps are formed between the outwardly extending fingers, plant stalks are captured in the gaps, the gaps are sufficiently deep to ensure that they pass over the snapping channel of the picking device.

Claim 5. A feeding and picking device as defined by claim 4 wherein the feeding and picking device is provided with two rotating feeding elements, an upper feeding element and a lower feeding element, the upper feeding element has a direction of rotation, the upper feeding element is provided with outwardly extending fingers that are curved away from the direction of rotation.

Claim 6. A feeding and picking device as defined by claim 5 wherein the lower feeding element is located beneath the upper feeding element.

Claim 7. A feeding and picking device as defined by claim 6 wherein the lower feeding element has a direction of rotation that is identical to the direction of rotation of the upper feeding element.

Claim 8. A feeding and picking device for feeding and picking a standing agricultural crop wherein individual plants in the crop are provided with plant stalks, the feeding and picking device comprising a rotating feeding element that is rotated in a circle about a vertical axis and comprises a body with outwardly extending fingers, the rotating feeding element grasps plant stalks and directs the plant stalks to a picking device which separates useable parts from plant stalks, the picking device having an effective length, wherein the rotating feeding element is designed to transport the plant throughout the effective length of the picking device, wherein the picking device is provided with a snapping channel, the feeding element covers the snapping channel, wherein gaps are formed between the outwardly extending fingers, plant stalks are captured in the gaps, the gaps are sufficiently deep to ensure that they pass over the snapping channel of the picking device, wherein the feeding and picking device is provided with two rotating feeding elements, an upper feeding element and a lower feeding element, the upper feeding element has a direction of rotation, the upper feeding element is provided with outwardly extending fingers that are curved away from the direction of rotation, wherein the lower feeding element is located beneath the upper feeding element, wherein the lower feeding element has a direction of rotation that is identical to the direction of rotation of the upper feeding element, and wherein the lower feeding element is provided with outwardly extending fingers that are curved towards the direction of rotation.

Claim 9. A feeding and picking device as defined by claim 8 wherein the picking device is mounted on the side of the feeding element.

Claim 10. A feeding and picking device as defined by claim 9 wherein the picking device is provided with an inlet, the inlet being located in front of the vertical axis of the feeding element.

Claim 11. A feeding and picking device as defined by claim 10 wherein the lower feeding element has a lower element diameter and the upper feeding element has an upper element diameter, the lower element diameter is smaller than the upper element diameter.

Claim 12. A feeding and picking device as defined by claim 10 wherein the lower feeding element has a lower element diameter and the upper feeding element has an upper element diameter, the lower element diameter is equal to the upper element diameter.

Claim 13. A feeding and picking device as defined by claim 10 wherein the lower feeding element is provided with a lower vertical axis and the upper feeding element is provided with an upper vertical axis, the lower vertical axis and the upper vertical axis are coaxial.

Claim 14. (Canceled).

Claim 15. A feeding and picking device as defined by claim 10 wherein the upper feeding element has the same number of fingers as the lower feeding element.

Claim 16. (Canceled).

Claim 17. A feeding and picking device as defined by claim 10 wherein the picking device further comprises a snapping bar and at least one snapping roll, the at least one snapping roll extends parallel to the snapping channel and is mounted under said snapping bar.

Claim 18. The feeding and picking device as defined by claim 17 wherein said feeding and picking device has a direction of travel, the snapping channel extends parallel to the direction of travel.

Claim 19. The feeding and picking device as defined by claim 17 wherein said feeding and picking device has a direction of travel, the snapping channel extends at an angle to the direction of travel.

Claim 20. A crop harvesting machine having at least two feeding and picking devices, wherein each feeding and picking device feeds and picks a standing agricultural crop wherein individual plants in the crop are provided with plant stalks, the feeding and picking device comprising a rotating feeding element that is rotated in a circle about a vertical axis and comprises a body with outwardly extending fingers, the rotating feeding element grasps plant stalks and directs the plant stalks to the picking device which separates useable parts from plant stalks, the picking device having an effective length, wherein the rotating feeding element is designed to transport the plant throughout the effective length of the picking device and further wherein the picking device is provided with an inlet, the inlet being located in front of the vertical axis of the feeding element.

Claim 21. A crop harvesting machine as defined by claim 20 having a symmetrical line, feeding and picking devices are symmetrically arranged with respect to each other about the symmetrical line.

Claim 22. The crop harvesting machine of claim 1, wherein the picking device comprises two stalk rolls having forward ends, and further wherein the axis is located behind and to the side of the two forward stalk roll ends.

Claim 23. The crop harvesting machine of claim 2, wherein the picking device comprises two stalk rolls having forward ends, and further wherein the axis is located behind and to the side of the two forward stalk roll ends.

Claim 24. The crop harvesting machine of claim 20, wherein the picking device comprises two stalk rolls having forward ends, and further wherein the axis is located behind and to the side of the two forward stalk roll ends.